All managers feel compelled to grow their companies. But all growth is subject to limits. Is perpetual growth a mirage? Maybe not. Michael E. Raynor, co-author of a new book, *The Innovator's Solution: Creating and sustaining successful growth,* to be released in October, introduces us to the limitless opportunity created by DISRUPTION.

the growth paradox

SENIOR MANAGERS IN ANY SUCCESSFUL company are subject to a fundamental paradox: They are driven to find ways to perpetuate the historical growth of their organizations, always believing that continued success is not only possible, but also to be expected. And yet, the information tells us that the odds of actually achieving sustained growth are horribly low: A generous estimate would put the number of companies that can grow for a decade or more at 1 in 10, while, of companies that experience a drop in sales, no more than 1 in 20 is able to restart growth.

Believing that continuous growth is possible in the face of these facts suggests that either most business managers are masters of denial, or they ironically meet F. Scott Fitzgerald's test of a first-rate intelligence; namely, they are able to simultaneously hold two opposing ideas in mind, yet retain the ability to function.

The need for this kind of willing suspension of disbelief on the part of so many business executives is a function of the apparent randomness of successful innovation. For although there have been no shortage of attempts to explain what makes for successful innovation, contradictory and conflicting advice abounds.

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For example, managers are advised to focus on their companies' "core," but, at the same time, they must seek relentless "creative destruction" and wholesale change. They are offered examples of innovation and renewal effected by charismatic and powerful leaders, even as the merits of a more subdued, behind-the-scenes leadership driven by quiet passion are extolled. Faced with lousy odds and lacking any means of finding ways to cope, the pursuit of uninterrupted growth does indeed appear quixotic.

Our research suggests that this need not be the case, and that successful innovation can be made much more predictable and repeatable than it has been in the past. Our principles for successful innovation are discussed at length in *The Innovator's Solution: Creating and Sustaining Successful Growth*, and they are summarized here in the form of "ten commandments" for successful innovation (with apologies to Cecil B. DeMille and Charlton Heston).

To continue the metaphor, these "commandments" are inscribed on two "tablets": one describes the nature of an innovation-driven growth strategy, and the second examines how to implement it.

The Nature of Strategy

It's helpful to think about getting the "right strategy" in terms of five factors: products, customers, marketing, profitability and sustainability.

1. Products: Don't make better products than your competitors; make worse ones.

A critical challenge for any business is to find a way to avoid getting crushed by powerful incumbent companies. When their most profitable customers are targeting, these incumbents almost always prove to be able to beat back challenges from even well-financed new entrants. For example, Xerox survived a challenge from IBM in its core copier market, while IBM itself warded off GE in the computer business, even though, at the time, IBM was much bigger than Xerox and much smaller than GE.

We refer to the innovations required to succeed in these kinds of battles as "sustaining," since they maintain both the existing business and the trajectory of improvement valued by current, valuable customers.

In contrast, "disruptive" innovations appeal to markets that the incumbents are happy to ignore or relieved to walk away from. The reason? Disruptive innovations are "worse" on those dimensions of performance that are most valued by an incumbent's most valuable customers. And they are better only on dimensions of performance that appeal to small or otherwise unattractive market segments.

This disruptive foothold offers an invaluable proving ground for new products or services; here, they can improve on dimensions of performance that matter to larger segments. Eventually, disruptive innovations catch up to the incumbents' offerings, but only after it's typically too late for the incumbents to respond. In a word, they have been "disrupted." For example, integrated steel producers were happy to leave the reinforcing bar steel market to upstart "mini-mills." Yet, over time, the mini-mills got better and better, to the point that they could produce structurally equivalent steel at much lower prices.

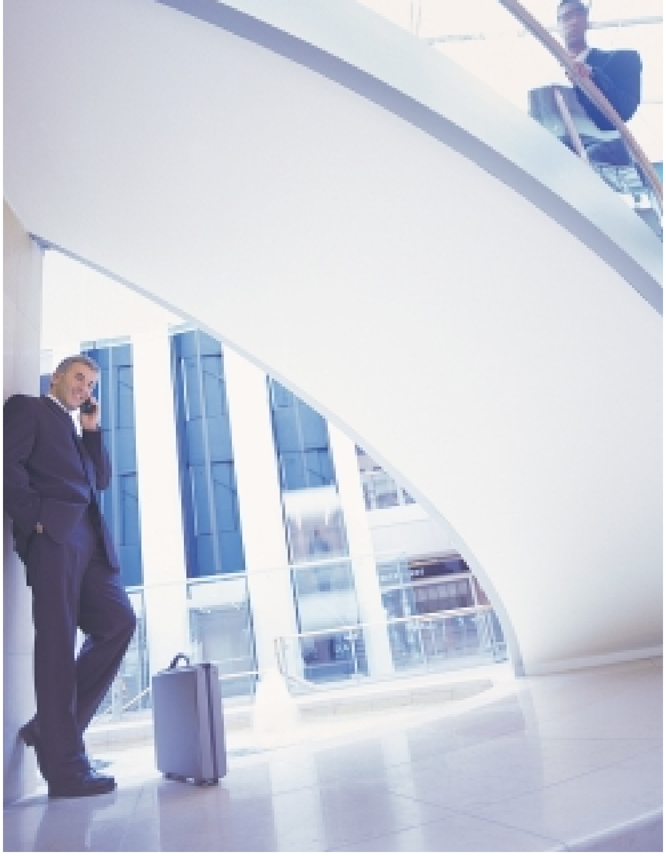
2. Customers: Don't go after the most profitable customers; go after those who don't buy at all.

If there is conventional wisdom to share when it comes to new business, it's that success stems from targeting the most profitable customers; in other words, the ones that buy lots of a given product or service—and the less price-sensitive the better.

However, the more suitable customers for a disruptive innovation are those that are least likely to covet existing products and, in fact, don't buy anything like these products. We call this "competing with non-consumption."

For example, Sony established itself as a global consumer electronics giant by repeatedly finding ways to bring products to consumers who previously hadn't been anyone's customers. Take the advent of the transistor radio. Established radio manufacturers sold vacuum tube-based radios-as-furniture to heads of households, so that the family could listen to the kinds of old-fogey music parents have always listened to. These firms knew about and understood transistors, and, in fact, were pouring millions of dollars into developing them to the point that they could perform as well as their established products with respect to sound quality.

Sony, on the other hand, exploited an entirely different attribute: the portability made possible by the small size of transistors. The sound was tinny and full of static, but the devices were cheap, and they offered teenagers the ability to listen to *real* music wherever and whenever they wanted. Eventually, in classic disruptive fashion, the fidelity of transistor radios improved to the point that they overtook vacuum tube-based units by traditional definitions of performance. Established firms tried to respond, but by then it was too late: Sony had mastered the technology and dominated the relevant distribution channels.



3. Marketing: Don't sell to demographic profiles; sell to the jobs people want to get done.

Identifying who your customers are is something typically left to the marketing department. Demographic and psychographic profiles offer exhaustive descriptions of consumers' characteristics such as race, gender, income, family make-up, and so on. All go into defining target segments. The problem is that, although this information lends itself to rigorous quantification and almost endless analysis, it has almost no connection to how people actually make decisions.

What seems to be a far better predictor of consumer behavior is how well products or services enable people to get the jobs they have to do done efficiently and expediently. Designing and improving products in ways that remain connected with these jobs is far more effective and, in the end, intuitive than trying to connect with "white men, aged 45 to 55, with three children and incomes between $35 thousand and $40 thousand."

Take, for example, the wildly successful Blackberry handheld wireless email device from the Canadian firm Research in Motion (RIM). It's not unusual to see it appear in boring meetings, in airport lounges, on the subway, and so on. This suggests that people "hire" it to make them productive in small snippets of time.

If RIM were to think about the next-generation Blackberry in terms of who buys the current version, they'd find themselves in quite a fix. All sorts of people buy Blackberrys, including traveling salespeople, consultants and senior executives—in short, people that, on the basis of conventional demographic profiling, would appear to have very different needs. Traditional measures would lead RIM to either choose a segment or settle for some kind of compromise that left everyone unsatisfied. But by thinking about improvements in terms of making it possible to be productive in short bursts, RIM can stay connected with its entire current customer base and even expand it.

4. Profitability: Don't focus on your core competence; focus on what drives value.

There are few more generally accepted axioms than this: Companies seeking to innovate should focus their efforts on what they do best. Unfortunately, there are few more damaging pieces of advice when it comes to exploiting ideas with truly disruptive potential.

Take, for example, the case of Hewlett-Packard's fabulously successful inkjet printer business. Originally a cheap but lower-resolution alternative to laser jet technology, inkjets have successfully migrated up market, evolving from an internal HP startup in 1981 to more than $20 billion in sales.

Was this success a function of focusing on the core? Not at all. As a fundamental advance in printing technology, HP's nascent inkjet division had to push the frontiers of ink chemistry, plastic compounds and manufacturing techniques, and a host of other technologies and processes. In none of these was HP a leader, but the subtlety and complexity of the interactions between these components made working with suppliers out of the question. As the technology has stabilized, HP has been able to outsource more and more components, but the company continues to hang on to those components that drive the performance that matters to its customers—and, in so doing, continues to hang on to most of the profits, as well. These elements of the value chain have become HP's core competence, but they certainly didn't start out that way.

5. Sustainability: Don't accept commoditization; follow profits along the value chain.

It's often tempting to conclude that no matter how innovative or revolutionary a new product, its inevitable fate is to be commoditized—driven into zero-sum game battles for market share decided by who can survive the longest on the thinnest margins.

But that's not necessarily the case. Incumbent firms in an industry are driven by competition to provide more of whatever customers are willing to pay for, whether features or customizability. Those attributes that customers reward with price premiums or market share we call "the basis of competition" in a market.

But competitive forces seem inevitably to lead firms to provide too much of what customers had once rewarded. Providing still more eventually no longer yields the competitive advantage it once did, and so incumbents are driven to price-based competition. This phenomenon leads to the illusion of commoditization.

For example, Intel has long commanded high prices on a sustained basis for each new generation of microprocessor. Of late, however, new and still vastly improved chips have commanded less of a premium and for shorter periods of time. We interpret this to mean that the chips are providing more speed than customers are willing to pay for. It would seem that the chip is on the cusp of being commoditized.

The answer is to provide more of what customers have come to want more of, rather than continuing to push the frontier of what they already have too much of. In Intel's case, this has translated into a shift in emphasis from the speed of the "Pentium" brand chip to the wireless connectivity enabled by its "Centrino" chip. Ever-faster chips are no longer market-beaters; wireless capability is now the basis of competition. And Intel seems poised to continue its success by adapting its efforts accordingly.

Strategy Implementation It's not enough to know what the right strategy is; you have to implement it, as well. And when it comes to implementing growth strategies based on disruptive innovation, it's helpful to think about the challenges in terms of these five factors: management, structure, decision making, setting expectations and leadership.

6. Management: Don't entrust your new business to people with the right "attributes"; find those with the right "experiences."

It would seem that new business initiatives launched within established companies often fail because the people chosen to manage the new venture are those whose management skills were honed addressing entirely different problems.

For example, Pandesic was a joint venture between Intel and SAP, two well-established and highly successful firms in the microprocessor and enterprise software markets, respectively. Pandesic originally was intended to be a disruptive innovation, bringing a form of enterprise software to small companies. The initial strategy had many of the hallmarks of a successful disruption. Unfortunately, the venture closed its doors in 2001 after four years in operation and an investment of more than $100 million.

This failure might seem perplexing, given the fact that the company fairly bristled with first-rate management talent drawn from the senior ranks of both parent organizations. They seemed to have all the right attributes: a track record of success, able to think strategically, strong relationship-building skills—the list could go on almost indefinitely.

The problem wasn't their "attributes," however, it was their almost complete lack of experience in coping with relevant kinds of problems. Their careers were built on tackling the issues faced by established, successful companies, not the issues faced by new organizations attempting to exploit a disruptive foothold. They were good at satisfying customers, not finding customers; they were good at improving products, not creating products; and so on.

The key to success as the manager of a business based on disruptive innovation is having grappled—not necessarily succeeded—with similar problems before.

7. Structure: Can a disruptive venture leverage the parent company's capabilities? No. True value comes from the parent company learning how to leverage the new venture's success.

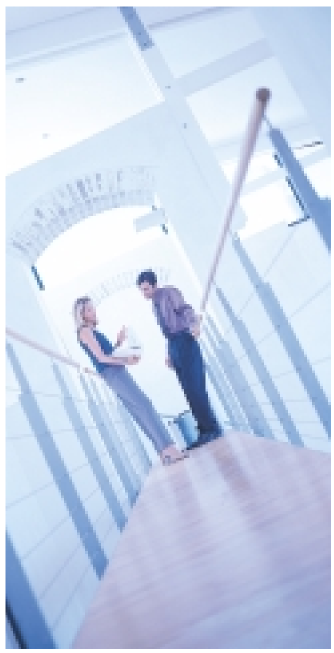
It's widely accepted that new business ventures in established companies are well served by a separate organizational structure. This provides much needed latitude to new businesses as they refine product specifications, identify the most valuable customers, establish viable distribution channels, and the like.

This relative isolation often is tempered by the well-intentioned belief that new, and typically resource-pressed businesses, can maximize their probability of success by leveraging parent company resources such as product development, marketing, distribution, after-sales support, and so on. Whatever the internal logic, this view both corrupts the new venture and undermines the long-term contribution of the innovation's success to the larger organization.

For example, Teradyne, a maker of microprocessor testing equipment, launched a new business, originally code-named Aurora, designed to disrupt their established testing equipment company. The division was set up as an organizationally separate division in a physically distinct location. In the interests of accelerating growth, Aurora's management sought ways to leverage Teradyne's established capabilities. Doing so required compromises that seemed unimportant, but turned out to have potentially devastating effects.

Aurora was able to refocus its attention on its original mandate, and to pursue that mandate entirely on the strength of its own capabilities, with famously successful results. Ultimately, the technology that Aurora perfected in its disruptive products was incorporated in Teradyne's mainstream products, thereby re-igniting growth on a corporate-wide basis.

8. Decision making: Strategies are frequently developed as detailed and forward-looking battle plans. This can work well for sustaining innovations, but disruptive businesses must be much more adaptive.



Many organizations think about strategy almost exclusively in terms of committing to the development and realization of a long-term plan. When this plan speaks to the desire or need to push the frontier of performance demanded by existing, profitable customers, this is entirely appropriate. For example, when IBM sought to reinvent the computer industry with its development of System 360 in the early 1960s, it had to commit enormous resources over long periods of time in order to overcome the technological hurdles associated with its strategy. And it worked in large part because IBM had a clear vision of what it was trying to accomplish and for whom. It also had ample evidence going in that if it were to succeed, the customers it was targeting would value what the company had created.

In contrast, potentially disruptive innovations actually suffer when approached with this kind of vision and dedication. When Sears and IBM discovered that Prodigy's two million subscribers were using Prodigy more for email than for shopping, they tried to bring the venture to heel by imposing surcharges on heavy email use, rather than reorienting the venture's strategy to this new use. Ultimately, the company failed, while AOL seized on the opportunity that Prodigy had uncovered to become the defining company of the Internet age.

9. Setting expectations: Companies seeking growth often are willing to suffer significant losses in its pursuit. Ironically, the best way to achieve growth is to insist on profitability.

Many sophisticated and well-managed firms explicitly accept the proposition that any significant growth initiative will necessarily suffer painful losses for a long time until it finally "turns the corner" and becomes profitable. For example, in the materials science business, a number of well-financed efforts by deep-pocketed incumbents—including Alcoa, General Electric, Alcan, and Hoechst Celanese—to deploy advanced ceramics materials as a disruptive innovation failed, largely because of a willingness to support a particular strategy in the face of persistent losses. Management at each of these companies likely felt they were being far-sighted and strategic, yet each ultimately had to abandon its efforts as, almost invariably, the corporate office lost either its appetite for or its ability to pony up the subsidies required to soldier on.

In contrast, Honda's efforts to penetrate the motorcycle market in the United States in the 1960s eventually proved successful because the company's resource constraints forced it to follow the money. Initially, Honda had hoped to sell low-cost "muscle bikes" to the mainstream market, which at the time was dominated by Harley-Davidson and British makers such as Triumph, BSA and Norton. But the riding habits of existing purchasers were such that Honda's entry into that market wasn't good enough to satisfy even price-sensitive buyers. Honda scrambled to overcome a variety of technical challenges, but faced with both a lack of funds and crippling foreign currency restrictions, it was unlikely that the company could have supported anything like the losses that would have been incurred by a dogged "strategic" commitment to that market.

As this was playing out, Honda stumbled into a surprising, and at first annoying, success: Its 50cc Supercub found an enthusiastic market among people who had never dreamed of buying the powerful, fast, difficult-to-ride bikes made by established manufacturers. At first taking these orders only to generate cash to fund its initial hopes of toppling Harley-Davidson directly, the Supercub became the cornerstone of Honda's North American business. From that initial foothold, Honda began to target more demanding customers until eventually it became a leading force in almost every segment of motorcycle buyers.

10. Leadership: Is the role of leadership to provide vision? Sometimes. When pursuing disruptive innovation, though, the real challenge is knowing when to break otherwise successful processes and how to make new ones.

The role of leadership in successful companies has been the subject of exhaustive study. The findings, however, have been anything but conclusive. On the same shelf as autobiographies premised on the notion that success requires leaders able to take the reins, studies suggest that a much more subtle, almost Svengali-like focus on processes is the key.

Successful growth does depend on leadership, but the kind of leadership required depends critically on the circumstances. When an organization is trying to establish a new business based on potentially disruptive innovation, existing processes will be more than inappropriate for the new venture; they will be actively hostile to it. In addition, the kinds of processes needed to make a disruption successful will not exist in the new organization.

As a result, it's often critical for senior managers to intervene directly in two ways. First, they must preempt those parent organization processes that threaten to weed out or otherwise undermine the pursuit of a disruptive strategy. Creating seemingly "inferior" products that appeal to apparently "unprofitable" customers that don't fit into any defined "segments" is not something that most planning systems can cope with. It requires leadership of the first order—informed in large part by the principles outlined here—to overcome the kinds of organizational antibodies that would otherwise quash the growth opportunities created by disruption.

In addition to "breaking" existing processes, senior managers must intervene, often personally, in order to "make" the processes the new, disruptive organization needs. This takes the form of coordinating and driving interactions and decisions in the new venture in order to ensure that it does not fall victim to "organizational atavism," reverting to the processes in place in the parent organization. For example, a large part of what threatened to derail Teradyne's Aurora division was an almost subconscious tendency on the part of Aurora's management to slip back into Teradyne's focus on product features and engineering excellence—attributes that were critical in Teradyne's established business, but poisonous to a disruptive venture. It took active intervention by Alex D'Arbeloff, Teradyne's CEO, to "break" those processes and help Aurora establish its own ways of doing things—ways appropriate to a disruptive strategy.

The Perfect Blend

Our research suggests that none of these principles is more important than any of the others. There are no "tradeoffs" to be made. Successful disruptive innovation requires getting all of them right.

Most attempts at disruptive innovation have lacked an explicit roadmap directing how to achieve this. As a result, realizing a new idea's potential has required getting lucky on each of these issues—the managerial equivalent of plucking the Queen of Diamonds from a deck of cards 10 consecutive times.

As far as we know, no company has ever successfully created a capability to identify and launch a series of disruptive innovations to drive successive waves of growth. Consequently, we have been obliged to offer principles rather than precedents. Nevertheless, it is our hope that these principles will provide a useful foundation for firms seeking to fulfill their mandate for continuous growth, and make the quest for successful innovation something more than an exercise in trying to beat the odds. □

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